

## LITERARY NOTICES.

**DIGEST OF AMERICAN CASES RELATING TO PATENTS FOR INVENTIONS AND COPYRIGHTS, FROM 1789 TO 1862.** By Stephen D. Law, Counsellor at Law, No. 52 John street, New York.

This is a handsome and large volume, containing a digested abstract of all the American cases, so far as they could be obtained, relating to patents for inventions, copyright and trade marks. It owes its origin to a want (experienced by its author) of some work containing a summary of the statute law and decisions of the courts in relation to patent cases. There are no less than eight hundred and thirty-four cases digested, and seven hundred and thirty-four of these have reference to patents for inventions. Of such cases about four hundred are to be found in the reports of the Supreme and Circuit Courts of the United States, contained in more than one hundred volumes, fifty cases from various law periodicals, and eighty are manuscript cases. All sources of information on American patents have been examined, such as decisions of the justices of the Circuit Court in Washington, on appeals from the Commissioner of Patents, &c., &c. Mr. Law has been very painstaking and laborious in preparing this work, and he has arranged the information in a most convenient manner for reference. It is not a mere dry digest, for all the most important points are carefully dwelt upon, so as to present correct and satisfactory information in relation to them. The decisions on particular patents are arranged in classes—those on reaping machines in one group, those on sewing machines in another, and so for all the patents, according to their specific character. It is the most valuable contribution to American patent laws that has yet been published, as a work of reference and reliable authority. The author deserves the thanks of the profession for his rich and valuable work.

**MANUAL OF GEOLOGY.** By Prof. James D. Dana, M.A., LL.D. Published by Theodore Bliss & Co., Philadelphia.

This is a much-desired volume, which supplies a want long felt by students of American geology. It is intended for the use of colleges, academies, and schools of science, as well as persons devoted to literature. It is illustrated by a chart of the world and over one thousand figures, mostly from American sources, it having special reference to American geological history. Its author is Professor of Geology, &c., in Yale College. American geology is written out by itself as a continuous history, and we have here presented a natural history of the earth—its continents, seas, climates, and life. The style of the author is not only instructive, but graceful and attractive.

Geology has become a most instructive and interesting science. In its survey of the earth science has recognized three kingdoms of nature, namely, the animal, vegetable, and inorganic or mineral. According to geology, the earth has been brought to its present condition through a series of changes or progressive formations, and under the guidance of the Almighty it has passed through a regular history, or growth, in seas and lands, rocks and mountains, in the physical conditions of heat and moisture, and in vegetable and animal life. As a historical science, geology finds strata of granite, sandstone, clay-rock, and limestone lying above one another in many successions; and it assumes that the sandstones were made of sand by some slow process, clayey rocks of clay, and that these were successively formed and belong to successive periods of the past, the lowest bed in a series being the earliest. Geology, therefore, infers that the character of each rock indicates some facts respecting the condition of the sea or land during the period of its formation. The rocks are, therefore, regarded as records of successive events in the history of the earth. Every rock marks an epoch in the earth's history; groups of rocks, periods; and large groups, ages; and the ages reaching through geological time are represented by the rocks that extend from the lowest to the uppermost series. A fossil shell, coral, bone, or leaf, found in one of the beds of rocks, is a record of some species that existed when that rock was forming, and it tells a tale of life of that epoch. By studying the character of these remains of past ages, geologists and

paleontologists restore the populations which have succeeded one another on the earth. Like the scholar who has studied the hieroglyphics and cuneiform characters on the tombs of Egypt and Assyria, and deciphered the history of past ages, so the geologist has constructed his alphabet of fossils, and given us the testimony of the rocks to the history of our planet in ages long before man raised a monument or wielded a pen. Geology has, therefore, become a most deeply interesting science to all men, and in this volume of Professor Dana we have the best work of the kind yet given to the public.

**EMPLOYMENT FOR WOMEN.** By Miss Virginia Penny. Published by Walker, Wise & Co., Boston, Mass.; and may also be obtained at Room 44, Bible House, this city.

To find out suitable channels in which women might successfully exercise their talents, hands, and brains has long been a subject of inquiry among philanthropists generally. So few branches have been hitherto known in which they could compete with men, that their sphere of usefulness has been somewhat restricted. We are not of those who believe in confining women to teaching, shop-tending, or a few of the simple avenues of trade which has been their walk heretofore. In most of the manual, mental, and mechanical operations of the day our sisters now compete with us; and we think it will prove a surprise to many men when they are told that out of five hundred and thirty-three articles which the book in question contains, more than five hundred are descriptions of work in which women have, or may be, engaged. The work also gives the average prices paid for labor, for board in the various towns of the several States, and furnishes, in brief, a compendious account of information upon this subject which would be otherwise unattainable.

## RECENT AMERICAN INVENTIONS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list.

**Nav Mode of Operating Railroad Pumps.**—This invention consists in the application of steam from the locomotive boiler to operate the piston or pistons of one or more steam cylinders which connect by suitable mechanism with the plunger of a railroad pump, in such a manner that whenever the locomotive arrives in the neighborhood of a pump, and when it is desired to throw water into the tender or into a tank situated at the side of the track from which it can be let down into the tender, this object is effected by connecting said steam cylinder or cylinders with the locomotive boiler, thereby operating the pump by steam power instead of the ordinary slow process of operating the pump by hand. Gilbert M. Cole, of Folsom city, Cal., is the inventor of this device.

**Knitting Machine.**—The principal object of this invention is to provide for the easy insertion and removal of the needles of a circular knitting machine, and to this end it consists mainly in a peculiarly constructed grooved conical needle plate and a peculiarly applied needle-operating ring, working in combination with such needle plate. The inventor of this knitting machine is W. B. Evans, of Holderness, of Grafton, N. H.

**Cartridge-tearer.**—This device is composed of two horns and an interposed fleam-like tooth to be attached to the barrel of the gun, near the muzzle, the horns being for the reception of the folded end of the cartridge between them and the fleam-like tooth being for the penetration and tearing of the paper while it is confined between the said horns. Dantel Kelly, of Grand Rapids, Mich., is the inventor of this device.

THERE is now exhibiting on the Boulevard Magenta, at Paris, the figure of a woman so constructed as to sing various songs. A tube of india-rubber represents the larynx; the voice has a compass of two octaves. The inventor is Mr. Faber, formerly a professor of mathematics in Germany.

COPPER cents, nickle cents and three-cent pieces are all of much less intrinsic value than the sums they represent, and people will make nothing by hoarding them.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING DECEMBER 16, 1862.

Reported Officially for the Scientific American.

\*.\* Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

37,146.—Knapsack Collar.—J. E. Atwood, Washington, D. C.:

I claim the use of a stiff leather collar constructed as described, when combined and arranged in the manner set forth, with a knapsack.

37,147.—Cider Mill.—P. J. Berlin, Blairsville, Pa.:

I claim the arrangement of the stripper, D, oscillating lever, I, spring lever, m, and crushing rollers, d d', with the wiper, m, and master wheel, in the manner herein shown and described.

[The object of this invention is to combine on the same platform an apparatus for crushing apples, &c., operated by means of a horse-power, and a device for pressing the crushed apples or other fruit, said platform being supported on sleigh runners, in such a manner that the whole cider mill can be readily moved from place to place and operated wherever it may be put up.]

37,148.—Grain Separator.—Murrin Burr, Plymouth, Mich.:

I claim the arrangement of the horizontally-vibrating shoe, D, and the screen, L, having an independent, vertical, reciprocating movement, for the purpose of agitating it sufficiently to discharge the foul seed and to prevent it from choking, as herein set forth.

In combination with the screen, L, I also claim the segments, M M', or their equivalents, pivoted to the shoe, and having shanks, I, resting in sockets of retaining cross pieces, C C', for the purpose of giving a reciprocating vertical movement to the said screen, with the horizontal vibrations of the shoe, substantially as herein specified.

I also claim the arrangement of the double-inclined spout, R, spaces, r r', between the shoe and walls of the mill, and seed receptacle, v, so arranged as to discharge the foul seed around the lower screen, U, and collect it, substantially as herein described.

I also claim the arrangement of the ledges, t, segments, M' M' or equivalents, and blocks, s, arranged in connection with the shoe, D, and walls, B B, of the mill, as herein specified.

37,149.—Combined Shoulder Brace and Suspenders.—D. W. Canfield, New York City:

I claim the combined shoulder brace and suspenders, composed of the shoulder straps, A, and neck straps, C C', front straps, D D', and end pieces, a and c c', the whole arranged and combined as herein set forth.

[This invention consists in a novel mode of arranging and combining the several straps and pieces of which the combined shoulder brace and suspender is composed, whereby it is made to serve as an effective shoulder brace, and to support the pantaloons or other garment with greater ease and comfort to the wearer than with the arrangements of parts in common use, and is rendered more perfectly adjustable.]

37,150.—Attaching Handles to Knives.—Matthew Chapman, Greenfield, Mass.:

I claim the flat tang, C, of the implement, provided with a V-shaped notch, a, at its end, in combination with the rivet, D, and the slot, b, in the handle, B, provided with a projection, c, at its bottom, of such a shape as to fit into the notch, a, of the tang, substantially as and for the purpose herein specified.

[This invention consists in having the handle of the knife or other article slotted longitudinally a certain distance from its inner end, and having the knife or other article provided with a flat tang, equal in length to the slot, the end of the tang having a V-shaped notch made in it, and the end of the slot provided with a corresponding shaped projection, which fits in the notch in the tang, when the latter is inserted in the slot in the handle, the above parts being used in connection with a rivet which passes through the handle and tang.]

37,151.—Grinding Mill.—J. M. Clark, Lancaster, Pa.:

First, I claim the mode substantially as described of attaching the cross-tie, r, and lever, E, to the hoop, d, for the purpose specified.

Second, I claim a revolving grain cup or disk, H, having couplings or lugs, h', and an attached tube, r, in combination with the rim, e.

Third, I claim applying to millstones a silent feed which is not affected by the act of setting the stones to grind either coarse or fine, substantially as described.

Fourth, I claim suspending the revolving cup or disk, H, from the cross-tie, r, by the tube, r, or its equivalent, in the manner and for the purpose set forth.

Fifth, I claim suspending the stationary grain guard, H', over the eye of the stones, and so that it may be removed therefrom with the cross-tie, r, for the purpose set forth.

Sixth, I claim the combination and arrangement of the lever, E, cross-tie, r, and hoop, d, substantially in the manner and for the purpose set forth.

Seventh, I claim the combination of the feed-lever rod, m', and rod, m, substantially as and for the purpose set forth.

Eighth, I claim operating an alarm and also an indicating apparatus, by means of a shaft which receives motion directly from the central portion of the mill-stone "runner," for the purpose specified.

Ninth, I claim the combination of the alarm apparatus and the indicating apparatus with the centrally-located shaft, 12, substantially as described, for the purpose set forth.

Tenth, I claim a lighter staff, j, in combination with the screw shaft, m, substantially as described.

Eleventh, I claim the head blocks, 112, whether stationary or adjustable, in combination with the "way," L, substantially as described, for the purpose set forth.

Twelfth, I claim applying to the bell shaft, K', a belt arm, x, and bell, B', which, by their centrifugal action, effect the alarm in connection with head blocks, 1 and 2 or their equivalents, substantially as described.

Thirteenth, I claim in a bell which constitutes a part of a centrifugal governor, so hanging the "clapper" on a pivoted spring-arm, that it has unobstructed freedom to move back and forth in the line of rotation of the bell, against the inner side of the bell, but is prevented from coming in contact with the bell in a direction at right angles thereto, substantially as described.

37,152.—Mode of operating Railroad Pumps.—G. M. Cole, Folsom City, Cal.:

I claim the application of one or more cylinders, D, which are supplied with steam from the locomotive through pipes, c c', in combination with the pump, B, as and for the purpose shown and described.

37,153.—Expanding Bedstead.—Nelson Cross, New York City:

I claim the combination of the side and cross levers or bars with the canvas top or bed piece, as and for the purpose aforesaid.

37,154.—Straw and Grain Separator.—A. B. Davis, Philadelphia, Pa.:

I claim, first, Separating the straw from the grain in threshing machines by means of a series of rocking rakes, arranged in respect to and operating in unison with each other, substantially as set forth.